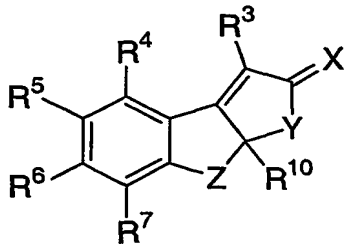
WHAT IS CLAIMED IS:

1. A compound of the formula:



wherein X is O, N-OR^a, N-NR^aR^b or C_{1-6} alkylidene, wherein said alkylidene group is unsubstituted or substituted with a group selected from hydroxy, amino, $O(C_{1-4}alkyl)$, $NH(C_{1-4}alkyl)$, or $N(C_{1-4}alkyl)_2$,
or X represents the following two singly bonded substituents, H and OR^a;
Y is CR^1R^2, $CH_2CR^1R^2$, $CH_2CH_2CR^1R^2$ or $CH_2CR^1R^2CH_2$;
Z is CR^8R^9, $CR^8R^9CH_2$ or $CR^{11}=CR^{12}$, and with the proviso that Y can not be $CH_2CR^1R^2$ when Z is CR^8R^9;
R^1 is hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl or C_{2-6}alkynyl, wherein said alkyl, alkenyl and alkynyl groups are either unsubstituted or substituted with a group selected from OR^c, SR^c, NR^bR^c ,C(=O)R^c, C(=O)CH_2OH, or phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from C_{1-4}alkyl, OH, $O(C_{1-4}alkyl)$, NH_2, $NH(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$, halo, CN, NO_2, CO_2H, $CO_2(C_{1-4}alkyl)$, C(O)H or C(O)(C_{1-4}alkyl);
R^2 is hydrogen, hydroxy, iodo, O(C=O)R^c, C(=O)R^c, CO_2R^c, C_{1-6}alkyl, C_{2-6}alkenyl or C_{2-6}alkynyl, wherein said alkyl, alkenyl and alkynyl groups are either unsubstituted or substituted with a group selected from OR^c, SR^c, NR^bR^c, C(=O)R^c, C(=O)CH_2OH, or phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from C_{1-4}alkyl, OH, $O(C_{1-4}alkyl)$, NH_2, $NH(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$, halo, CN, NO_2, CO_2H, $CO_2(C_{1-4}alkyl)$, C(O)H or C(O)(C_{1-4}alkyl);
or R^1 and R^2, when taken together with the carbon atom to which they are attached, form a carbonyl group;
or R^1 and R^2, when taken together, form a C_{1-6} alkylidene group, wherein said alkylidene group is either unsubstituted or substituted with a group selected from hydroxy, $O(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$ or phenyl, wherein said phenyl group can

either be unsubstituted or substituted with 1-3 substituents independently selected from C_{1-4}alkyl, OH, O(C_{1-4}alkyl), NH_2, NH(C_{1-4}alkyl), NH(C_{1-4}alkyl)$_2$, halo, CN, NO_2, CO_2H, CO_2(C_{1-4}alkyl), C(O)H or C(O)(C_{1-4}alkyl);

R^3 is hydrogen, fluoro, chloro, bromo, iodo, cyano, nitro, NR^aR^c, OR^a, $C(=O)R^a$, CO_2R^c, $CONR^aR^c$, SR^a, $S(=O)R^a$, SO_2R^a, C_{1-10}alkyl, C_{2-10}alkenyl, C_{2-10}alkynyl, C_{3-7}cycloalkyl, C_{5-7}cycloalkenyl, 4-7 membered heterocycloalkyl, (cycloalkyl)alkyl, (heterocycloalkyl)alkyl, aryl, heteroaryl, arylalkyl or (heteroaryl)alkyl, wherein said alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl and heteroaryl groups are either unsubstituted or independently substituted with 1, 2 or 3 groups selected from fluoro, chloro, bromo, iodo, cyano, OR^a, NR^aR^c, $O(C=O)R^a$, $O(C=O)NR^aR^c$, $NR^a(C=O)R^c$, $NR^a(C=O)OR^c$, $C(=O)R^a$, CO_2R^a, $CONR^aR^c$, $CSNR^aR^c$, SR^a, $S(O)R^a$, SO_2R^a, $SO_2NR^aR^c$, LR^d or MLR^d;

R^4 is hydrogen, hydroxy or fluoro;

R^5 is hydrogen, hydroxy, amino, methyl, CF_3, fluoro, chloro or bromo;

R^6 is hydrogen, fluoro, chloro, methyl, amino, OR^a, OR^b, $O(C=O)R^c$, $O(C=O)OR^c$, $NH(C=O)R^e$ or $NH(C=O)OR^e$;

R^7 is hydrogen, OR^b, NR^bR^c, fluoro, chloro, bromo, iodo, cyano, nitro, C_{1-6}alkyl, C_{2-6}alkenyl, CF_3 or CHF_2;

R^8 and R^9 are each independently selected from hydrogen, fluoro, chloro, C_{1-6}alkyl, C_{2-6}alkenyl or C_{2-6}alkynyl,

or R^8 and R^9, when taken together with the carbon atom to which they are attached, form a 3-5 membered cycloalkyl ring,

or R^8 and R^9, when taken together with the carbon atom to which they are attached, form a carbonyl group;

R^{10} is hydrogen, C_{1-10}alkyl, C_{2-10}alkenyl, C_{2-10}alkynyl, C_{3-6}cycloalkyl, C4-6cycloalkenyl, (cycloalkyl)alkyl, (cycloalkyl)alkenyl, (cycloalkenyl)alkyl, aryl, heteroaryl, arylalkyl or (heteroaryl)alkyl, wherein said alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, (cycloalkyl)alkyl, (cycloalkyl)alkenyl, (cycloalkenyl)alkyl, aryl, heteroaryl, arylalkyl and (heteroaryl)alkyl groups are optionally substituted with a group selected from bromo, iodo, cyano, OR^b, SR^b, $C(=O)R^b$, 1-3 C_{1-3}alkyl, 1-3 chloro or 1-5 fluoro,

or R^{10} and R^1, when taken together with the two to four intervening carbon atoms to which they are attached, form a 5-6 membered cycloalkyl or cycloalkenyl ring which is optionally substituted with 1-3 groups independently selected from

oxo, hydroxy, fluoro, chloro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, C_{1-6}alkylidenyl, C_{3-6}cycloalkyl, (cycloalkyl)alkyl, phenyl, or phenylalkyl, wherein said alkyl, alkenyl, alkynyl, alkylidenyl, cycloalkyl, (cycloalkyl)alkyl, phenyl, and phenylalkyl groups are optionally substituted with a group selected from chloro, bromo, iodo, OR^b, SR^b, C_{1-3}alkyl, $C(=O)R^b$, or 1-5 fluoro;

R^{11} is hydrogen, fluoro and C_{1-4}alkyl;

R^{12} is hydrogen, fluoro and C_{1-4}alkyl;

R^a is hydrogen, C_{1-10}alkyl, and phenyl, wherein said alkyl group is optionally substituted with a group selected from hydroxy, amino, $O(C_{1-4}alkyl)$, $NH(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$, phenyl, or 1-5 fluoro, and
wherein said phenyl groups can either be unsubstituted or substituted with 1-3 substituents independently selected from C_{1-4}alkyl, OH, $O(C_{1-4}alkyl)$, NH_2, $NH(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$, halo, CN, NO_2, CO_2H, $CO_2(C_{1-4}alkyl)$, C(O)H or $C(O)(C_{1-4}alkyl)$;

R^b is hydrogen, C_{1-10}alkyl, benzyl or phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from C_{1-4}alkyl, OH, $O(C_{1-4}alkyl)$, NH_2, $NH(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$, halo, CN, NO_2, CO_2H, $CO_2(C_{1-4}alkyl)$, C(O)H or $C(O)(C_{1-4}alkyl)$;

R^c is hydrogen, C_{1-10}alkyl or phenyl, wherein said phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from C_{1-4}alkyl, OH, $O(C_{1-4}alkyl)$, NH_2, $NH(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$, halo, CN, NO_2, CO_2H, $CO_2(C_{1-4}alkyl)$, C(O)H or $C(O)(C_{1-4}alkyl)$;
or R^a and R^c, whether or not on the same atom, can be taken together with any attached and intervening atoms to form a 4-7 membered ring;

R^d is NR^bR^c, OR^a, CO_2R^a, $O(C=O)R^a$, CN, $NR^c(C=O)R^b$, $CONR^aR^c$, $SO_2NR^aR^c$ or a 4-9 membered mono- or bi-cyclic N-heterocycloalkyl ring that can be optonally substituted with 1-3 C_{1-3} alkyl and can be optionally interrupted by O, S, NR^c, or C=O;

R^e is hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl, phenyl or phenylalkyl, wherein said alkyl, alkenyl, or phenyl group can either be unsubstituted or substituted with 1-3 substituents independently selected from C_{1-3}alkyl, OH, $O(C_{1-4}alkyl)$, NH_2, $NH(C_{1-4}alkyl)$, $N(C_{1-4}alkyl)_2$, halo, CN, NO_2, CO_2H, $CO_2(C_{1-4}alkyl)$, C(O)H or $C(O)(C_{1-4}alkyl)$;

L is CR^bR^c, C_{2-6} alkylene or C_{2-6} alkenylene, wherein said alkylene and alkenylene linkers can be optionally interrupted by O, S, or NR^c;
M is O, S, NR^c, C=O, O(C=O), (C=O)O, NR^c(C=O) or (C=O)NR^c;
or a pharmaceutically acceptable salt thereof.

2. The compound of Claim 1 wherein X is O or N-OR^a;
Y is CR^1R^2, $CH_2CR^1R^2$ or $CH_2CH_2CR^1R^2$;
Z is CR^8R^9 or CH_2CH_2, with the proviso that Y can not be $CH_2R^1R^2$ when Z is CR^8R^9;
R^1 is hydrogen or C_{1-6}alkyl, wherein said group is either unsubstituted or substituted with a group selected from OR^c or $C(=O)R^c$;
R^2 is hydrogen, hydroxy or C_{1-6}alkyl, wherein said alkyl group is either unsubstituted or substituted with a group selected from OR^c or $C(=O)R^c$;
R^3 is chloro, bromo, iodo, cyano, CO_2R^c, C_{1-10}alkyl, C_{3-7}cycloalkyl, aryl or heteroaryl, wherein said alkyl, cycloalkyl, aryl and heteroaryl groups are either unsubstituted or independently substituted with 1, 2 or 3 groups selected from fluoro, chloro, bromo, cyano, OR^a, CO_2R^a, LR^d or MLR^d;
R^4 is hydrogen or fluoro;
R^5 is hydrogen, hydroxy, fluoro, chloro or bromo;
R^6 is hydrogen, fluoro, amino, OR^a or $O(C=O)R^c$;
R^7 is hydrogen, fluoro, chloro, bromo or C_{1-6}alkyl;
R^8 and R^9 are each independently selected from hydrogen, fluoro, chloro or C_{1-6}alkyl, or R^8 and R^9, when taken together with the carbon atom to which they are attached, form a carbonyl group;
R^{10} is C_{1-10}alkyl, C_{2-10}alkenyl, C_{3-6}cycloalkyl or (cycloalkyl)alkyl, wherein said alkyl, alkenyl, cycloalkyl, and (cycloalkyl)alkyl groups are optionally substituted with a group selected from bromo, SR^b, 1-3 chloro or 1-5 fluoro;
or a pharmaceutically acceptable salt thereof.

3. The compound of Claim 2 wherein X is O or N-OH;
Y is CR^1R^2 or $CH_2CH_2CR^1R^2$;
Z is CH_2 or CH_2CH_2;
R^1 is hydrogen or C_{1-3}alkyl;
R^2 is hydrogen, hydroxy or C_{1-3}alkyl;

R^3 is chloro, bromo, cyano, C_{1-10}alkyl, C_{3-7}cycloalkyl, aryl or heteroaryl, wherein said alkyl, cycloalkyl, aryl, and heteroaryl groups are either unsubstituted or independently substituted with 1, 2 or 3 groups selected from fluoro, chloro, cyano, OR^a, LR^d or MLR^d;

R^4 is hydrogen;

R^5 is hydrogen or fluoro;

R^6 is OR^a or $O(C=O)R^c$;

R^7 is hydrogen, chloro or methyl;

R^8 and R^9 are each hydrogen, or R^8 and R^9, when taken together with the carbon atom to which they are attached, form a carbonyl group;

R^{10} is C_{1-10}alkyl or (cycloalkyl)alkyl, wherein said alkyl and (cycloalkyl)alkyl groups are unsubstituted or substituted with 1-5 fluoro;

or a pharmaceutically acceptable salt thereof.

4. The compound of Claim 3 wherein X is O;

Y is CH_2 or $CH_2CH_2CH_2$;

R^1 is hydrogen;

R^2 is hydrogen;

R^3 is chloro, bromo, cyano, methyl, ethyl, trifluoromethyl, cyclopropyl, phenyl, furyl or thienyl;

R^6 is hydroxy;

R^8 and R^9 are each hydrogen;

an or a pharmaceutically acceptable salt thereof.

5. The compound of Claim 1 selected from the group consisting of:

3-bromo-8a-butyl-6-hydroxy-8,8a-dihydrocyclopenta[*a*]inden-2(1*H*)-one;

(*rac*)-(1*S*,8a*R*)-3-bromo-8a-butyl-6-hydroxy-1-propyl-8,8a-dihydrocyclopenta[*a*]inden-2(1*H*)-one;

1,3a-diethyl-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;

3a-butyl-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;

1,6-dibromo-3a-butyl-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;

1-bromo-3a-butyl-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;

6-bromo-3a-butyl-7-hydroxy-1-methyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;

3a-butyl-7-hydroxy-1,6-dimethyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;

3a-butyl-7-hydroxy-1-methyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;

1-bromo-3a-butyl-6-chloro-8-fluoro-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
10a-butyl-7-hydroxy-1,9,10,10a-tetrahydro-3(2*H*)-phenanthrenone;
4-bromo-10a-butyl-7-hydroxy-1,9,10,10a-tetrahydro-3(2*H*)-phenanthrenone;
9a-butyl-2-hydroxy-5-methyl-8,9,9a,10-tetrahydrobenzo[*a*]azulen-6(7*H*)-one;
1-bromo-7-hydroxy-3a-methyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
7-hydroxy-1,3a-dimethyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
1,6-dibromo-7-hydroxy-3a-methyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
6-bromo-7-hydroxy-1,3a-dimethyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
1-bromo-3a-ethyl-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
3a-ethyl-7-hydroxy-1-methyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
1,6-dibromo-3a-ethyl-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
1-bromo-7-hydroxy-3a-propyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
7-hydroxy-1-methyl-3a-propyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
1,6-dibromo-7-hydroxy-3a-propyl-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
1-bromo-6-chloro-3a-ethyl-7-hydroxy -3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
1-bromo-3a-butyl-6-chloro-7-hydroxy-3,3a,4,5-tetrahydro-2*H*-cyclopenta[*a*]naphthalen-2-one;
and the pharmaceutically acceptable salts thereof.

6. A pharmaceutical composition comprising a compound according to Claim 1 and a pharmaceutically acceptable carrier.

7. A pharmaceutical composition made by combining a compound according to Claim 1 and a pharmaceutically acceptable carrier.

8. A process for making a pharmaceutical composition comprising combining a compound according to Claim 1 and a pharmaceutically acceptable carrier.

9. A method of eliciting an estrogen receptor modulating effect in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of a compound according to Claim 1.

10. The method according to Claim 9 wherein the estrogen receptor modulation effect is an estrogen receptor agonizing effect.

11. The method according to Claim 10 wherein the estrogen receptor agonizing effect is an ERβ receptor agonizing effect.

12. A method of treating or preventing a disease in a mammal in need thereof by administering to the mammal a therapeutically effective amount of a compound according to Claim 1, wherein said disease is: bone loss, bone fractures, osteoporosis, metastaic bone disease, Paget's disease, periodontal disease, cartilage degeneration, endometriosis, uterine fibroid disease, hot flashes, increased levels of LDL cholesterol, cardiovascular disease, impairment of cognitive functioning, cerebral degenerative disorders, restenosis, gynecomastia, vascular smooth muscle cell proliferation, obesity, incontinence, anxiety, depression, perimenopausal depression, post-partum depression, premenstrual syndrome, manic depression, anxiety, dementia, obsessive compulsive behavior, attention deficit disorder, sleep disorders, irritability, impulsivity, anger management, multiple sclerosis and Parkinson's disease or an estrogen dependent cancer.

13. The method of Claim 12 wherein the disease is hot flashes.

14. The method of Claim 12 wherein the disease is depression.

15. A method of treating or preventing an estrogen dependent cancer in a mammal in need thereof by administering to the mammal a therapeutically effective amount of a compound according to Claim 1.

16. A pharmaceutical composition comprising a compound of Claim 1 and another agent selected from: an organic bisphosphonate; a cathepsin K inhibitor; an estrogen; an estrogen receptor modulator; an androgen receptor modulator; an inhibitor of osteoclast proton ATPase; an inhibitor of HMG-CoA reductase; an integrin receptor antagonist; an osteoblast anabolic agent; calcitonin; Vitamin D; a synthetic Vitamin D analogue; or a selective serotonin reuptake inhibitor; or a pharmaceutically acceptable salt or mixture thereof.

17. A method of treating hot flashes comprising administering to a mammal in need thereof a compound of Claim 1 and another agent selected from: an organic bisphosphonate; a cathepsin K inhibitor; an estrogen; an estrogen receptor modulator; an androgen receptor modulator; an inhibitor of osteoclast proton ATPase; an inhibitor of HMG-

CoA reductase; an integrin receptor antagonist; an osteoblast anabolic agent; calcitonin; Vitamin D; a synthetic Vitamin D analogue; or a selective serotonin reuptake inhibitor; or a pharmaceutically acceptable salt or mixture thereof.

18. A method of treating depression comprising administering to a mammal in need thereof a compound of Claim 1 and another agent selected from: an organic bisphosphonate; a cathepsin K inhibitor; an estrogen; an estrogen receptor modulator; an androgen receptor modulator; an inhibitor of osteoclast proton ATPase; an inhibitor of HMG-CoA reductase; an integrin receptor antagonist; an osteoblast anabolic agent; calcitonin; Vitamin D; a synthetic Vitamin D analogue; or a selective serotonin reuptake inhibitor; or a pharmaceutically acceptable salt or mixture thereof.

19. A method of treating an estrogen dependent cancer comprising administering to a mammal in need thereof a compound of Claim 1 and another agent selected from: an organic bisphosphonate; a cathepsin K inhibitor; an estrogen; an estrogen receptor modulator; an androgen receptor modulator; an inhibitor of osteoclast proton ATPase; an inhibitor of HMG-CoA reductase; an integrin receptor antagonist; an osteoblast anabolic agent; calcitonin; Vitamin D; a synthetic Vitamin D analogue; or a selective serotonin reuptake inhibitor; or a pharmaceutically acceptable salt or mixture thereof.

20. A method of lowering cholesterol comprising administering to a mammal in need thereof a compound of Claim 1 and another agent selected from: an organic bisphosphonate; a cathepsin K inhibitor; an estrogen; an estrogen receptor modulator; an androgen receptor modulator; an inhibitor of osteoclast proton ATPase; an inhibitor of HMG-CoA reductase; an integrin receptor antagonist; an osteoblast anabolic agent; calcitonin; Vitamin D; a synthetic Vitamin D analogue; or a selective serotonin reuptake inhibitor; or a pharmaceutically acceptable salt or mixture thereof.